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TECHNICAL NOTE

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Bureau of Land Management U.S. DEPARTMENT OF THE INTERIOR

Subject: Evaluation, Coal, Depreciation Rates

Reference: Table F from Mine Examination Report Valuation, Pierce and Kennedy, 1960, Pierce Management Corporation, Scranton, Pennsylvania.

Data: See attached sheets.

Please send any additional references on this subject or other minerals subjects to DSC (D-310). If the complete article or publication is needed, DSC (D-310) will attempt to obtain a copy or a loan for you.

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TABLE F -- DEPRECIATION RATES

(For application, see Section 9-8)

PLANT AND STRUCTURES

Item	General Minimum and Maximum Life Years	Economical Average Life Years	Annual Rate of Depreciation Percent
Breaker:			
Steel	25-50	40	2-1/2
Wood	15-40	30	3-1/3
Tipple:			
Steel	25-50	40	2-1/2
Wood	15-40	30	3-1/3
Blacksmith Shop:			
Steel	20-25	30	3-1/3
Wood	15-25	20	5
Barn:			
Wood	20-30	25	4
Bath House:			
Wood	15-25	20	5
Car-Repair Shop:			
Steel	20-35	30	3-1/3
Wood	15-25	20	5
Electric Repair Shop:			
Wood	15-25	20	5
Machine Shop:			
Steel	20-35	30	3-1/3
Wood	15-25	20	5
Office:			
Wood	10-25	15	6-2/3
Ovens:			
Beehive	5-15	10	10
By-product	5-20	12	8-1/3
Power-Plant Building:			
Steel	20-40	30	3-1/3
Wood	10-30	20	5
Brick	25-50	40	2-1/2
Washery:			
Wood	10-20	15	6-2/3
General Surface Buildings:			
Brick	10-50	40	2-1/2
Steel	15-40	30	3-1/3
Concrete	15-40	30	3-1/3
Wood	10-25	15	6-2/3
EQUIPMENT			
Auto Crane:			
Gas	3-10	5	20
Steam	2-17	6	16-2/3
Auto Truck	3-6	4	25
Auto Trailer	3-10	5	20
Automobiles	3-8	5	20
Boxes, Weigh	5-10	8	12-1/2

TABLE F (Continued)

Item	General Minimum and Maximum Life Years	Economical Average Life Years	Annual Rate of Depreciation Percent
Boilers	5-15	10	10
Boiler Feed Pumps	5-15	10	10
Booms, Loading	5-15	10	10
Blacksmith-Shop Equipment	5-15	10	10
Chutes, Metal	2-8	5	20
Conveyors	5-10	8	12-1/2
Coal Crushers	5-15	10	10
Cages:			
Fixed	5-15	10	10
Self-Dumping	3-12	8	12-1/2
Cars, Mine	3-6	5	20
Crane, Hoisting	10-25	15	6-2/3
Cutting Machines	10-20	15	6-2/3
Cables	1-3	2	50
Compressor, Air	10-20	15	6-2/3
Car-Repair-Shop Equipment	5-15	10	10
Cars, Dump:			
Steel	5-15	8	12-1/2
Wood	3-8	5	20
Dragline	3-10	5	20
Dumping Machinery	5-10	8	12-1/2
Drilling Machinery, Churn	10-15	12	8-1/3
Drills:			
Rock	2-5	3	33-1/3
Diamond	5-15	10	10
Dynamo, Electric	10-30	20	5
Electric-Shop Equipment	5-15	10	10
Excavator	3-10	5	20
Fan	10-25	15	6-2/3
Fan Engine	10-20	15	6-2/3
Fire Appliances	10-15	12	8-1/3
Flumes	5-15	10	10
Generator, Electric	10-30	20	5
Horses	5-15	10	10
Haul, Chain	5-10	8	12-1/2
Hoists, Inside:			
Steam	10-30	20	5
Electric	10-25	15	6-2/3
Air	10-30	20	5
Hoists, Outside:			
Steam	10-25	15	6-2/3
Electric	10-20	12	8-1/3
Air	10-25	15	6-2/3
Gasoline	10-20	12	8-1/3

TABLE F (Continued)

Item	General Minimum and Maximum Life Years	Economical Average Life Years	Annual Rate of Depreciation Percent
Locomotives, Inside:			
Trolley	10-15	12	8-1/3
Battery	10-15	12	8-1/3
Locomotives, Outside:			
Steam	10-35	20	5
Electric	10-30	20	5
Air	10-35	20	5
Gasoline	10-30	20	5
Lift, Car	5-15	10	10
Loaders, Boxcar	5-15	10	10
Mules:			
Inside	2-6	4	25
Outside	5-15	10	10
Machines, Cutting	5-15	10	10
Machines, Loading	5-15	10	10
Machinery, Breaker	2-8	5	20
Machinery, Washery	2-8	5	20
Machine-Shop Equipment	5-15	10	10
Machine Mining:			
Puncher	5-15	10	10
Chain	5-15	10	10
Mixer	3-10	5	20
Office Equipment			
Pumps:			
Mine	5-15	10	10
Surface	10-20	15	6-2/3
Pipe Lines:			
Air	5-10	8	12-1/2
Water	5-10	8	12-1/2
Screens:			
Shaking	3-8	5	20
Revolving	3-8	5	20
Scales, Weighing	10-20	15	6-2/3
Scraper, Coal	3-5	4	25
Shaker Chutes	3-5	4	25
Shovels	3-10	5	20
Softener, Water	5-15	10	10
Tracks, Inside	5-15	8	12-1/2
Tracks, Outside	5-15	8	12-1/2
Tools, Hand	5-10	8	12-1/2
Tables, Picking	5-10	8	12-1/2
Telephones	3-10	5	20
Tractors	3-10	5	20
Wagons	2-6	4	25

TABLE G -- EQUAL ANNUAL PAYMENT FACTORS

(Annual payment in n-year series, whose present value is 1 with interest compounded annually)

(For application, see Section 9-12)

a_n = annual payment. r = interest rate.
$R = 1 + r$ n = number of years.

$$a_n = \frac{R^n r}{R^n - 1}$$

Yrs.	r = 3%	r = 4%	r = 5%	r = 6%
1	1.03	1.04	1.05	1.06
2	0.522611	0.530196	0.537805	0.545437
3	0.353530	0.360349	0.367209	0.374110
4	0.269027	0.275490	0.282012	0.288592
5	0.218355	0.224627	0.230975	0.237396
6	0.184598	0.190762	0.197018	0.203363
7	0.160506	0.166610	0.172820	0.179135
8	0.142456	0.148528	0.154722	0.161036
9	0.128434	0.134493	0.140690	0.147022
10	0.117231	0.123291	0.129505	0.135868
11	0.108077	0.114149	0.120389	0.126793
12	0.100462	0.106552	0.112825	0.119277
13	0.094030	0.100144	0.106456	0.112960
14	0.088526	0.094669	0.101024	0.107585
15	0.083767	0.089941	0.096342	0.102963
16	0.079611	0.085820	0.092270	0.098952
17	0.075953	0.082199	0.088699	0.095445
18	0.072709	0.078993	0.085546	0.092357
19	0.069814	0.076139	0.082745	0.089621
20	0.067216	0.073582	0.080243	0.087185
21	0.064872	0.071280	0.077996	0.085005
22	0.062747	0.069199	0.075971	0.083046
23	0.060814	0.067309	0.074137	0.081279
24	0.059047	0.065587	0.072471	0.079679
25	0.057428	0.064012	0.070953	0.078227
26	0.055938	0.062567	0.069564	0.076904
27	0.054564	0.061239	0.068292	0.075697
28	0.053293	0.060013	0.067123	0.074593
29	0.052115	0.058880	0.066046	0.073580
30	0.051019	0.057830	0.065051	0.072649